

# Notice of Allowability

Application No.

09/933,905

Examiner

Merilyn P. Nguyen

Applicant(s)

ALONSO ET AL.

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## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the interview with Applicant's representative on March 15, 2006.
2. ☒ The allowed claim(s) is/are 1,4,7-10,13,16-19,22 and 25-27 and now renumbered as 1-15.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

***DETAILED ACTION***

1. In response to the communication dated March 15, 2006 following by Examiner's Amendment, claims 1, 4, 7-10, 13, 16-19, 22 and 25-27 are active in this application as a result of the cancellation of claims 3, 12 and 21, and in the condition for allowance.

***Acknowledges***

2. Receipt is acknowledged of the following items from the Applicant:
- o The applicant's amendments have been considered.

***Examiner's Amendment***

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Chadwick A. Jackson, Reg. No. 46,495 on March 15, 2006.

The application has been amended as follows:

1. A computer implemented method of searching comprising the steps of:
  - receiving from a user a search query requesting information, wherein the query is provided to retrieve at least one recommendation and generate an expanded query;
  - retrieving the at least one recommendation for alternative search results using the received query, the recommendation based on users search query logs and user search patterns, and user profile information, wherein the at least one recommendation relating

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to the query is retrieved from a recommendation database, and wherein the recommendation database is generated by performing the steps of:

performing data mining using the users search query logs, the user search patterns, and the user profile information to generate a plurality of recommendations relating to search query strings based on the users search query logs, user search patterns, received query and user profile information,

generating a data structure including the plurality of recommendations relating to search query strings, and

determining that the at least one recommendation is a valid recommendation in the plurality of recommendations relating to the search query strings;

generating a text index including the at least one valid recommendation;

generating an expanded query using the received query;

performing a search using the expanded query to retrieve documents;

generating thematic clusters relating to the retrieved documents, the thematic clusters generated by performing linguistic analysis of the retrieved documents using linguistic extraction features to generate themes that describe the retrieved documents; and

presenting the recommendation for alternative search results, the thematic clusters relating to the retrieved documents, and the retrieved documents.

3. (Cancelled)

4. The method of claim [[3]] 1, wherein the user profile information comprises aggregate information.

7. The method of claim 1, wherein the step of generating a data structure including the recommendations [[using the received]] relating to search query strings comprises the steps of:

populating an initial data structure with recommendations relating to search query strings, including an equivalence table comprising a plurality of terms and/or phrases and equivalents thereof;

converting the plurality of terms and/or phrases and equivalents thereof to extensible Markup Language format; and

validating availability of the recommendations.

10. A system for searching comprising:  
a processor operable to execute computer program instructions; and  
a memory operable to store computer program instructions executable by the processor, for performing the steps of:

receiving from a user a search query requesting information, wherein the query is provided to retrieve at least one recommendation and generate an expanded query;

retrieving the at least one recommendation for alternative search results using the received query, the recommendation based on users search query logs and user search

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patterns, and user profile information, wherein the at least one recommendation relating to the query is retrieved from a recommendation database, and wherein the recommendation database is generated by performing the steps of:

performing data mining using the users search query logs, the user search patterns, and the user profile information to generate a plurality of recommendations relating to search query strings based on the users search query logs, user search patterns, received query and user profile information,

generating a data structure including the plurality of recommendations relating to search query strings, and

determining that the at least one recommendation is a valid recommendation in the plurality of recommendations relating to the search query strings;

generating a text index including the at least one valid recommendation;

generating an expanded query using the received query;

performing a search using the expanded query to retrieve documents;

generating thematic clusters relating to the retrieved documents, the thematic clusters generated by performing linguistic analysis of the retrieved documents using linguistic extraction features to generate themes that describe the retrieved documents; and

presenting the recommendation for alternative search results, the thematic clusters relating to the retrieved documents, and the retrieved documents.

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12. (cancelled)

13. The system of claim [[12]] 10, wherein the user profile information comprises aggregate information.

16. The system of claim [[1]] 10, wherein the step of generating a data structure including the recommendations [[using the received]] relating to search query strings comprises the steps of:

populating an initial data structure with recommendations relating to search query strings, including an equivalence table comprising a plurality of terms and/or phrases and equivalents thereof;

converting the plurality of terms and/or phrases and equivalents thereof to extensible Markup Language format; and

validating availability of the recommendations.

19. A computer program product for performing a search in an electronic data processing system, comprising:

a computer readable medium;

computer program instructions, recorded on the computer readable medium, executable by a processor, for performing the steps of:

receiving from a user a search query requesting information, wherein the query is provided to retrieve at least one recommendation and generate an expanded query;

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retrieving the at least one recommendation for alternative search results using the received query, the recommendation based on users search query logs and user search patterns, and user profile information, wherein the at least one recommendation relating to the query is retrieved from a recommendation database, and wherein the recommendation database is generated by performing the steps of:

performing data mining using the users search query logs, the user search patterns, and the user profile information to generate a plurality of recommendations relating to search query strings based on the users search query logs, user search patterns, received query and user profile information,

generating a data structure including the plurality of recommendations relating to search query strings, and

determining that the at least one recommendation is a valid recommendation in the plurality of recommendations relating to the search query strings;

generating a text index including the at least one valid recommendation;

generating an expanded query using the received query;

performing a search using the expanded query to retrieve documents;

generating thematic clusters relating to the retrieved documents, the thematic clusters generated by performing linguistic analysis of the retrieved documents using linguistic extraction features to generate themes that describe the retrieved documents; and

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presenting the recommendation for alternative search results, the thematic clusters relating to the retrieved documents, and the retrieved documents.

21. (cancelled)

22. The computer program product of claim [[21]] 19, wherein the user profile information comprises aggregate information.

25. The computer program product of claim [[1]] 19, wherein the step of generating a data structure including the recommendations [[using the received]] relating to search query strings comprises the steps of:

populating an initial data structure with recommendations relating to search query strings, including an equivalence table comprising a plurality of terms and/or phrases and equivalents thereof;

converting the plurality of terms and/or phrases and equivalents thereof to extensible Markup Language format; and

validating availability of the recommendations.

#### **Allowable subject matter**

4. The following is an examiner's statement of reason for allowance:

None of the references of record Pitkow (US 2002/0016786), Kravets (US 6,363,377), Simoudis (US 5,692,107), and Hofmann (US 6,687,696) teaches or



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suggests the claimed (Claim 1, 10 and 19) invention having, in addition to the other limitations in the claims, the limitation of generating a recommendation database by performing the steps of:

performing data mining using the users search query logs, the user search patterns, and the user profile information to generate a plurality of recommendations relating to search query strings based on the users search query logs, user search patterns, received query and user profile information,

generating a data structure including the plurality of recommendations relating to search query strings, and

determining that the at least one recommendation is a valid recommendation in the plurality of recommendations relating to the search query strings;

generating a text index including the at least one valid recommendation.

Dependent claims 4, 7-9, 13, 16-18, 22 and 25-27 are allowable because they depend from base claims.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

***Conclusion***

6. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the day of this letter. Failure to respond within the period for response will cause the application to become abandoned (see M.P.E.P 710.02(b)).

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bowman U.S Patent No. 6,006,225 discloses refining search queries by the suggestion or correlated terms from prior searches.

Bowman U.S Patent No. 6,169,986 discloses system and method for refining search queries.

Bailey U.S Patent No. 6,785,671 discloses system and method for locating we-based product offerings.

Glance U.S Patent No. 6,732,088 discloses collaborative searching by query induction.

Adar U.S Patent No. 6,493,702 discloses system and method for searching and recommending documents in a collection using share bookmarks.

Schuetze U.S Patent No. 6,598,054 discloses system and method for clustering data objects in a collection.

Tamayo U.S Patent No. 6,836,773 discloses enterprise web mining system and method.

Larry Fitzpatrick and Mei Dent discloses, "Automatic Feedback Using Past Queries: Social Searching?", 1997.

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Raymond Kosala and Hendrik Blockeel discloses, "Web Mining Research: A Survey", 1999.

Ji-Rong Wen, Jian-Yun Nie and Hong-Jiang Zhang discloses, "Clustering User Queries of a Search Engine", 2001.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marilyn P Nguyen whose telephone number is 571-272-4026. The examiner can normally be reached on M-F: 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

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March 15, 2006

*Frantz Coby*  
**FRANTZ COBY**  
**PRIMARY EXAMINER**